

**REMARKS**

Claims 1-22 are pending in the application. Claim 1 is amended with this response. Reconsideration of the application is respectfully requested based on the following remarks.

**I. REJECTION OF CLAIMS 1-5, 14-17 AND 22 UNDER 35 U.S.C. § 103(a)**

Claims 1-5, 14-17 and 22 were rejected under 35 U.S.C. §103(a) as being unpatentable over Walczak *et al.* (U.S. Patent 5,193,223) in view of Franchville *et al.* (U.S. Patent 6,041,076) and Ichihara (U.S. Patent 6,587,513). Reversal of the rejection is respectfully requested for at least the following reasons.

***i. Walczak et al. and Franchville et al. are not properly combinable.***

As admitted in the Office Action, neither Walczak *et al.* nor Franchville *et al.* nor Ichihara teach a method for undersampling the modulated transmission ***signal with respect to the carrier frequency*** as recited in claim 1. (See O.A., 10/16/07, page 4, lines 5-7). Accordingly, the combination of Walczak *et al.* and Franchville *et al.* are relied upon for these features.

In order to arrive at the present invention, one of ordinary skill in the art must have been ***motivated to modify Walczak et al. in view of Franchville et al.*** It is conceded that such motivation may be found in the references themselves, in the nature of the problem to be solved, or in the knowledge generally available to one skilled in the art. MPEP § 2143.01, citing to In re Kotzab, 217 F.3d 1365, 55 USPQ2d 1313 (Fed. Cir. 2000). ***Nevertheless, such motivation and the source thereof may not be conclusory, but rather the showing must be clear and particular.*** In re Dembiczak, 175 F.3d 994; 50 USPQ2D 1614 (Fed. Cir. 1999). It is respectfully submitted that upon a proper analysis of the cited art, and application of the appropriate standard enunciated above, pending claim 1 is non-obvious over the cited art.

The cited references themselves provide no teaching that would motivate one of ordinary skill in the art to make modifications thereto in accordance with the present

invention. Rather, the teachings within the cited references, when properly considered as a whole, would discourage the suggested combination. In particular, Walczak *et al.* teach a “**TDMA cellular telephone** (600) includes in its transmit signal path, microphone (608), vocoder (612), data format circuitry (601), **quadrature modulator (602)**, 90 MHz local oscillator (606), transmitter with mixer (604), transmitter filter (618), and antenna (620).” (See Abstract) Walczak *et al.* disclose the “The present invention is generally related to radiotelephones, and more particularly to power control circuitry for a time-division multiple-access (TDMA) radio frequency (RF) transmitter that may be advantageously used in digital cellular telephones.” (See *e.g.*, Column 1, lines 9-13, emphasis added).

In contrast, Franchville *et al.* teach that “[while] down conversion reduces the processing speed requirements of the digital measurement circuits to some degree, the processing speed required even for such down-converted CATV signals remains relatively high, and contributes significantly to the cost of the circuit.” There is a need, therefore, for a device that measures power of digitally modulated communication signals without requiring high speed digital processing circuitry. (See column 3, lines 44-47, emphasis added). Franchville *et al.* further teach in all of the figures of the cited art disclose community antenna television (CATV, also known as community access television or cable TV circuits). Fig. 1 discloses that the “RF receiver 102 is configured to receive an RF input signal that includes a first signal through a CATV coaxial cable.” (See *e.g.*, column 4, lines 45-51, emphasis added). The measurement front end 204 comprises a RF input circuit that receives and provides initial conditioning to an input signal received from the CATV input. (See *e.g.*, column 7, lines 15-18, emphasis added) is disclosed for Fig. 2. Finally, Fig. 3 discloses the carrier signal frequency is a CATV channel frequency between 5 MHz and 890 MHz (See *e.g.*, column 13, lines 25-28, emphasis added).

The cited art provides no teaching or suggestion to combine these references or any advantages associated therewith. Rather, Walczak *et al.* specifically disclose TDMA (time division multiple access) technology used in digital cellular telephone

communications, as discussed *supra*, whereas Franchville *et al.* disclose digitally modulated CATV power measurement using undersampling, as discussed *supra*. Therefore one of ordinary skill in the art would not be motivated to combine together the cited references.

Claims 2-5, 14-17 and 22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Walczak *et al.*, as applied to independent claim 1 above, and further in view of Franchville *et al.* It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Neither Walczak *et al.* and Franchville *et al.*, alone or in combination, teach or suggest all limitations recited in the subject claims.

Claims 2-5, 14-17 and 22 depend from independent claim 1. As discussed *supra*, Walczak *et al.* does not teach or suggest all limitations recited in independent claim 1 and Franchville *et al.* fails to overcome the deficiencies of Walczak *et al.* and, therefore, can not teach or suggest all limitations of claims that depend there from. Accordingly, withdrawal of this rejection and allowance of the claims 1-5, 14-17 and 22 is requested.

- ii. Even if a combination of Walczak et al. and Franchville et al. could be made, the combination does not provide undersampling with respect to the carrier frequency, as recited in claim 1.***

Claim 1 recites an analog/digital converter that undersamples the modulated transmission signal with respect to the carrier frequency. As conceded in the Office Action, Walczak *et al.* do not teach any undersampling. Franchville *et al.* do disclose undersampling, but do not provide any teaching regarding what the undersampling is “with respect to”, because the signal being undersampled in the cited reference is not a modulated signal. In the invention of claim 1, the modulated transmission signal has the carrier signal with a carrier frequency, with payload data modulated thereon, wherein the payload data has its own payload data frequency. Consequently, one could undersample the modulated signal with respect to the carrier frequency or with

respect to the payload data frequency. Franchville *et al.* provide no teaching that would motivate one of ordinary skill in the art to pick one over the other. Therefore the combination of cited art does not teach or suggest the invention of claim 1.

***iii. Ichihara does not teach a preemphasis network that is configured to adjust relative phases and/or amplitudes of in-phase and quadrature signal components, wherein the preemphasis is configured to effectuate sideband and carrier suppression, as recited in claim 1.***

Claim 1 recites a preemphasis network that is configured to provide preemphasis to alter the relative phases of in-phase and quadrature signal components, and/or alter the amplitude of the in-phase and quadrature signal components. Further, the preemphasis generated by the preemphasis network is configured to specifically effectuate sideband and carrier suppression. Ichihara does not teach this feature.

While Ichihara does disclose a preemphasis network, the teaching in the cited reference appears to be directed primarily at linearity. Predistortion can be provided to address various types of transmission issues, and depending on what is being addressed, the predistortion (or preemphasis) being supplied may differ. The preemphasis network of the present invention specifically generates preemphasis to effectuate sideband and carrier suppression. Ichihara does not teach this feature. Therefore the combination of the cited references does not render obvious the invention of claim 1. Accordingly, withdrawal of the rejection is respectfully requested.

## **II. REJECTION OF CLAIMS 6-7, 10 AND 13 UNDER 35 U.S.C. § 103(a)**

Claims 6-7, 10 and 13 were rejected under 35 U.S.C. §103(a) as being unpatentable over Walczak *et al.* (U.S. Patent 5,193,223) in view of Franchville *et al.* (U.S. Patent 6,041,076) and Ichihara (U.S. Patent 6,587,513) as applied to claim 1 above, and in further view of Shyue (U.S. Patent 6,359,936). Reversal of the rejection is respectfully requested for at least the following reasons.

As highlighted above, the claimed invention with respect to independent claim 1, and thus claim 6-7, 10 and 13 which depend from claim 1 are nonobvious over the cited art. Accordingly, a reversal of the rejection is respectfully requested.

**III. REJECTION OF CLAIMS 8-9 and 11-12 UNDER 35 U.S.C. § 103(a)**

Claims 8-9 and 11-13 were rejected under 35 U.S.C. §103(a) as being unpatentable over Walczak *et al.* (U.S. Patent 5,193,223), Franchville *et al.* (U.S. Patent 6,041,076), Ichihara (U.S. Patent 6,587,513) and Shyue (U.S. Patent 6,359,936) as applied to claims 6, 7 above, and further in view of Torre *et al.* (U.S. Patent 6,720,839). Reversal of the rejection is respectfully requested for at least the following reasons.

As highlighted above, the claimed invention with respect to independent claim 1, and thus claim 8-9 and 11-12 which depend from claim 1 are nonobvious over the cited art. Accordingly, a reversal of the rejection is respectfully requested.

**IV. REJECTION OF CLAIMS 18-21 UNDER 35 U.S.C. § 103(a)**

Claims 18-21 were rejected under 35 U.S.C. §103(a) as being unpatentable over Walczak *et al.* (U.S. Patent 5,193,223) in view of Franchville *et al.* (U.S. Patent 6,041,076) and Ichihara (U.S. Patent 6,587,513) as applied to claim 1 above, and further in view of Torre *et al.* (U.S. Patent 6,720,839). Reversal of the rejection is respectfully requested for at least the following reasons.

As highlighted above, the claimed invention with respect to independent claim 1, and thus claims 18-21 which depend from claim 1 are nonobvious over the cited art. Accordingly, a reversal of the rejection is respectfully requested.

**V. CONCLUSION**

For at least the above reasons, the claims currently under consideration are believed to be in condition for allowance.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application; the Examiner is invited to contact the undersigned at the telephone number provided below.

Should any fees be due as a result of the filing of this response, the Commissioner is hereby authorized to charge the Deposit Account Number 50-1733, EHFP136WOUS.

Respectfully submitted,  
ESCHWEILER & ASSOCIATES, LLC

By /Thomas G. Eschweiler/

Thomas G. Eschweiler  
Reg. No. 36,981

National City Bank Building  
629 Euclid Avenue, Suite 1000  
Cleveland, Ohio 44114  
(216) 502-0600